

What is claimed is:

1. A comprehensive signalling node, comprising:
  - a signalling interface adapted for transmitting and receiving signalling communications;
  - 5 a storage system configured to store a Media Gateway Controller (MGC) routine, to store a Session Initiation Protocol (SIP) routine, to store a Session Border Controller (SBC) routine, to store a Push-To-Talk (PTT) routine, to store a H.323 routine, to store a Wide Area Network (WAN) compression routine, and to store a Communication Assistance for Law Enforcement (CALE) routine; and
  - 10 a processing system in communication with the signalling interface and the storage system, with the processing system being configured to receive a signalling communication through the signalling interface, process the signalling communication with the MGC routine if appropriate, process the signalling communication with the SIP routine if appropriate, process the signalling communication with the SBC routine if
  - 15 appropriate, process the signalling communication with the PTT routine if appropriate, process the signalling communication with the H.323 routine if appropriate, process the signalling communication with the WAN compression routine if appropriate, or process the signalling communication with the CALE routine if appropriate.

2. The comprehensive signalling node of claim 1, with the storage system being further configured to store an enable/disable system and with the processing system being further configured to receive a configuration command, with the configuration command specifying an enable or disable operation for one or more specified signalling routines of the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine, and perform the configuration operation of the configuration command, wherein the configuration operation enables or disables the one or more specified signalling routines.

3. The comprehensive signalling node of claim 2, with the comprehensive signalling node further comprising an operator interface in communication with the processing system, and wherein the processing system is configured to receive the configuration command through the operator interface.

4. The comprehensive signalling node of claim 1, with the storage system being further configured to store operational data from the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.

5. The comprehensive signalling node of claim 1, with the storage system being further configured to store operational data from the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine, and with the processing system being further configured to receive a  
5 report command and generate and transmit a report including operational data specified in the report command.

6. The comprehensive signalling node of claim 1, with the storage system being further configured to store a billing system and with the processing system being further  
10 configured to perform billing operations for the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.

7. The comprehensive signalling node of claim 1, with the storage system being further configured to store a provisioning system and with the processing system being  
15 further configured to perform provisioning operations for the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.

8. A method of operating a comprehensive signalling node, comprising:
- receiving a signalling communication;
  - processing the signalling communication with a Media Gateway Controller (MGC) routine if appropriate;
  - 5        processing the signalling communication with a Session Initiation Protocol (SIP) routine if appropriate;
  - processing the signalling communication with a Session Border Controller (SBC) routine if appropriate;
  - processing the signalling communication with a Push-To-Talk (PTT) routine if
  - 10    appropriate;
  - processing the signalling communication with a H.323 routine if appropriate;
  - processing the signalling communication with a Wide Area Network (WAN) compression routine if appropriate; and
  - processing the signalling communication with a Communication Assistance for
  - 15    Law Enforcement (CALE) routine if appropriate.

9. The method of claim 8, further comprising:

receiving a configuration command in the comprehensive signalling node, with the configuration command specifying an enable or disable operation for one or more specified signalling routines of the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine;  
5 and

performing the configuration operation of the configuration command, wherein the configuration operation enables or disables the one or more specified signalling routines.

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10. The method of claim 9, with the receiving comprising receiving the configuration command through an operator interface of the comprehensive signalling node.

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11. The method of claim 8, further comprising collecting and storing operational data from the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.

12. The method of claim 8, further comprising:

collecting and storing operational data from the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine;

5 receiving a report command; and

generating and transmitting a report including operational data specified in the report command.

13. The method of claim 8, further comprising the comprehensive signalling node

10 performing billing operations for the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.

14. The method of claim 8, further comprising the comprehensive signalling node

performing provisioning operations for the MGC routine, the SIP routine, the SBC  
15 routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.

15. A comprehensive signalling node software product, comprising:

a control software configured to direct a processing system to receive a signalling communication, process the signalling communication with a Media Gateway Controller (MGC) routine if appropriate, process the signalling communication with a Session

5 Initiation Protocol (SIP) routine if appropriate, process the signalling communication with a Session Border Controller (SBC) routine if appropriate, process the signalling communication with a Push-To-Talk (PTT) routine if appropriate, process the signalling communication with a H.323 routine if appropriate, process the signalling communication with a Wide Area Network (WAN) compression routine if appropriate, or  
10 process the signalling communication with a Communication Assistance for Law Enforcement (CALE) routine if appropriate; and

a storage system that stores the control software.

16. The software product of claim 15, wherein the control software is further

15 configured to direct the processing system to receive a configuration command in the comprehensive signalling node, with the configuration command specifying an enable or disable operation for one or more specified signalling routines of the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine, and perform the configuration operation of the  
20 configuration command, wherein the configuration operation enables or disables the one or more specified signalling routines.

17. The software product of claim 16, wherein the control software receives the configuration command through an operator interface of the comprehensive signalling node.

5           18. The software product of claim 15, wherein the control software is further configured to direct the processing system to collect and store operational data from the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.

10           19. The software product of claim 15, wherein the control software is further configured to direct the processing system to collect and store operational data from the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine, receive a report command, and generate and transmit a report including operational data specified in the report  
15   command.

          20. The software product of claim 15, wherein the control software is further configured to direct the processing system to perform billing operations for the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN  
20   compression routine, and the CALE routine.



21. The software product of claim 15, wherein the control software is further configured to direct the processing system to perform provisioning operations for the MGC routine, the SIP routine, the SBC routine, the PTT routine, the H.323 routine, the WAN compression routine, and the CALE routine.